

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES INSTALLATION OF A NEW TRAFFIC SIGNAL AT THE INTERSECTION OF US 29 (COLUMBIA PIKE) AND I-70 IN HOWARD COUNTY. US 29 (COLUMBIA PIKE) IS ASSUMED TO RUN IN THE NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION OPERATES IN A NEMA TWO PHASE. FULL-TRAFFIC-ACTUATED MODE WITH SOUTHBOUND US 29 OPERATING ALONE AND THE I-70 RAMP OPERATING ALONE.

PROJECT CONTACTS

The contact persons for this project are as follows:

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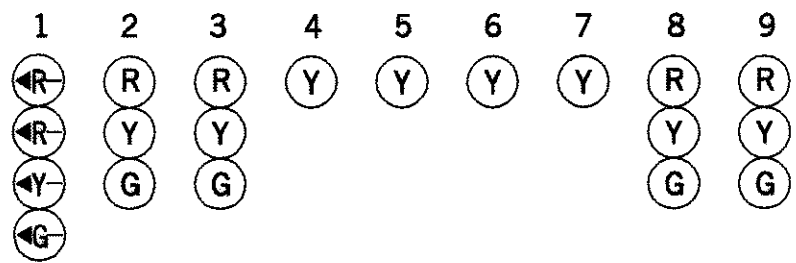
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DISTRICT UTILITY ENGINEER  
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PHASE CHART



PHASE 1	1	2	3	4	5	6	7	8	9
1 CHANGE	←G-	G	G	FL/Y	FL/Y	FL/Y	FL/Y	R	R
PHASE 2	←R-	R	R	FL/Y	FL/Y	FL/Y	FL/Y	G	G
2 CHANGE	←R-	R	R	FL/Y	FL/Y	FL/Y	FL/Y	Y	Y
FLASHING OPERATION	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y

EQUIPMENT LIST FOR CONTRACT NO. XX4435186

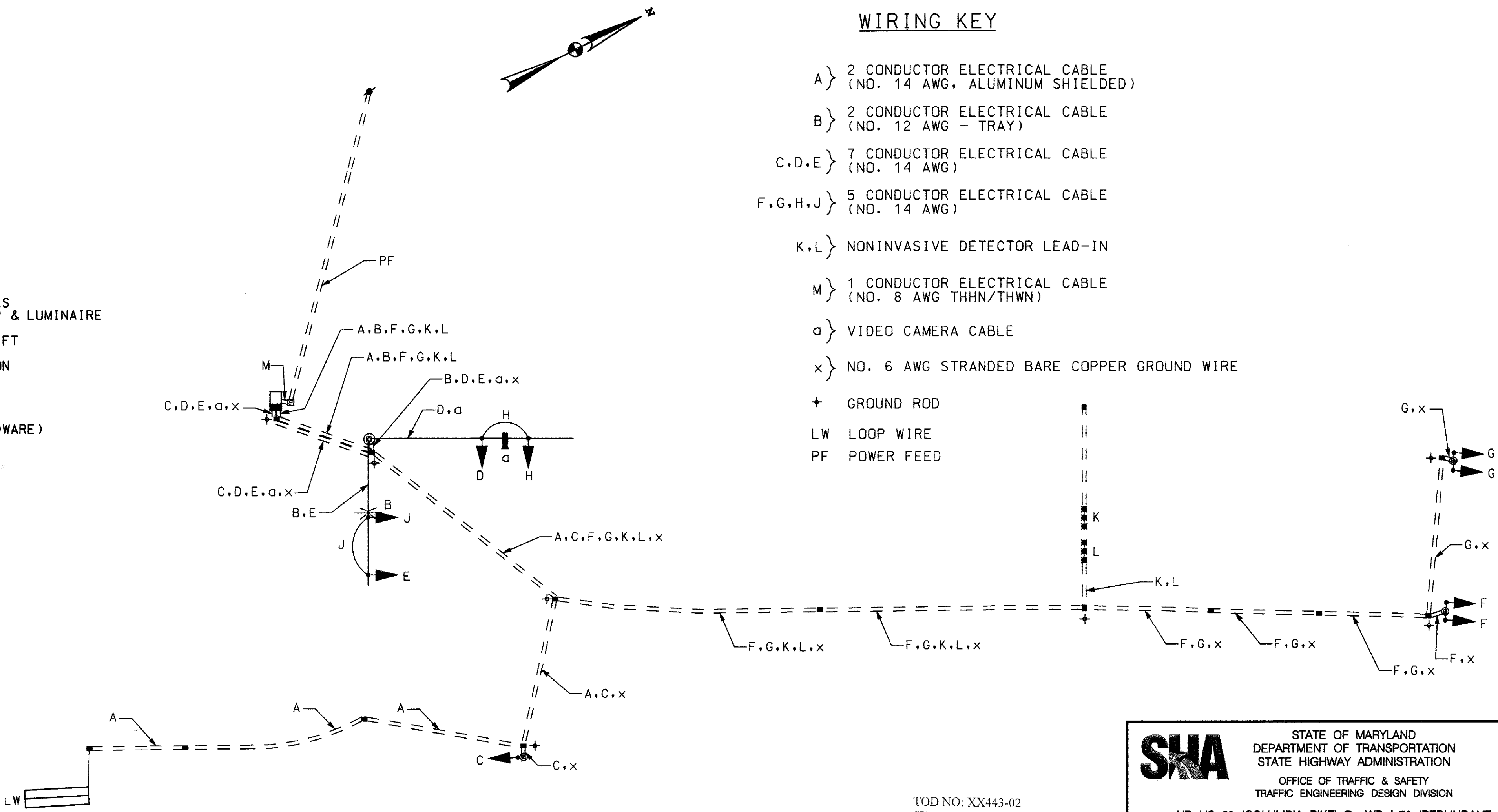
A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

ITEM	QUANTITY	UNIT	DESCRIPTION
9042	1	EA	[UPDATED] CONTROLLER ASC II WITH TELEMETRY
9044	1	EA	[UPDATED] CONTROLLER CABINET, SIZE 6
9086	1	EA	[UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
9570	23	SF	[UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN
	1	EA	W3-3 (48" X 48") GROUND MOUNTED
	1	EA	D95-25 (30" X 30") GROUND MOUNTED
9571	39	SF	[UPDATED] SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
	2	EA	W3-3 (48" X 48") POLE MOUNTED
	1	EA	R3-1 (30" X 30") MAST ARM MOUNTED

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM	QUANTITY	UNIT	DESCRIPTION
1003	1	EA	MAINTENANCE OF TRAFFIC
2002	1	CY	TEST PIT EXCAVATION
5007	25	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
8006	1	EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE
8008	3	EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8020	2	EA	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT
8021	1	EA	REM & DISPOSE MAT & EQUIP PER ASSIGN
8024	1	EA	TWIN MAST ARM POLE & 50 FT/70 FT MAST ARMS ANY 'T' DIMENSION
8025	1	EA	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8026	20	LF	1 INCH DETECTOR SLEEVE GALVANIZED OR FLEXIBLE LIQUID TIGHT
8032	580	LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8034	1225	LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8036	62	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8038	1050	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8041	1	EA	METERED SERVICE PEDESTAL EMBEDDED
8044	50	LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8045	14	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8050	20	EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8053	525	LF	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8056	2550	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8057	525	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8058	125	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC
8059	350	LF	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8060	85	LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)
8065	1	EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT

WIRING DIAGRAM



WIRING KEY

- A } 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG, ALUMINUM SHIELDED)
- B } 2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG - TRAY)
- C,D,E } 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- F,G,H,J } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- K,L } NONINVASIVE DETECTOR LEAD-IN
- M } 1 CONDUCTOR ELECTRICAL CABLE (NO. 8 AWG THHN/THWN)
- a } VIDEO CAMERA CABLE
- x } NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
- + } GROUND ROD
- LW } LOOP WIRE
- PF } POWER FEED

GEOMETRIC LEGEND

---	---	= EXISTING
---	---	= PROPOSED
SD	SD	STORM DRAIN
G	G	GAS MAIN
W	W	WATER MAIN
S	S	SEWER MAIN
E	E	ELECTRIC CABLES
A	A	AERIAL CABLES
T	T	TELEPHONE CABLES
F	F	FIBER-OPTIC

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APPROVALS	REVISIONS
TEAM LEADER	
ASST. DIV. CHIEF	
DIVISION CHIEF	
OFFICE DIRECTOR	

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
NB US 29 (COLUMBIA PIKE) @ WB I-70 (REDUNDANT RAMP)  
TRAFFIC SIGNAL DESIGN

GENERAL INFORMATION SHEET

SCALE: 1" = 20' ADVERTISED DATE: 12/08 CONTRACT NO.: XX4435186
DESIGNED BY: XM COUNTY: HOWARD
DRAWN BY: XM LOGMILE: 13002913.29
CHECKED BY: JB TMS NO.: J588
F.A.P. NO.: TOD NO.:
TS NO. 4705 DRAWING - OF SHEET NO. 2 OF 2

PLOTTED: Monday, December 15, 2008 AT 10:37 AM  
FILE: P:\04-005 Signals\US 29 @ I-70\Drawings\CADD\Working\p8g-N000-US29.dgn